

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
13 April 2006 (13.04.2006)

PCT

(10) International Publication Number  
WO 2006/038754 A1(51) International Patent Classification<sup>7</sup>: G02F 1/1335 (74) Agents: KWON, Oh-Sig et al.; 401 Jooeun Leaderstel, 921 Dunsan-Dong, Seo-Gu, Daejeon-City 302-828 (KR).(21) International Application Number:  
PCT/KR2005/000870

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 25 March 2005 (25.03.2005)

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2004-0078416 1 October 2004 (01.10.2004) KR

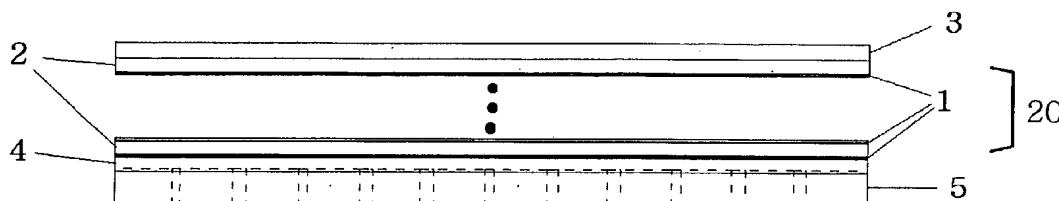
(71) Applicant (for all designated States except US): SAMSUNG FINE CHEMICALS CO., LTD [KR/KR]; 190 Yeocheon-Dong, Nam-Gu, Ulsan City 680-090 (KR).

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PRISM-PATTERED BROADBAND REFLECTIVE POLARIZER FOR LIQUID CRYSTAL DISPLAY



**(57) Abstract:** The present invention is related to a method of manufacture of a reflective polarizing film that can improve brightness of a liquid crystal display device remarkably by making a liquid crystal film that can over visible light by using cholesteric liquid crystal layers having different selective light-reflection central wavelengths, attaching a quarter wave ( $1/4 \lambda$ ) retardation film on top of the liquid crystal film, and adding prism patterns to the opposite side of the liquid crystal film. The reflective polarizing film of the preset invention is characterized by that two or more cholesteric liquid crystal layers having different selective reflection wavelength regions are laminated in order from a shorter wavelength to a longer wavelength, and brightness of a liquid crystal display device is maximized owing to an integrated film manufactured by attaching a  $\frac{1}{4} \lambda$  retardation film onto cholesteric liquid crystal layers and forming prism patterns onto the opposite side.

WO 2006/038754 A1